

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	1785	347/56	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/13 16:43
L2	3566	347/54,56,61,65.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/13 16:41
L3	9	(ink jet amorphous ceramic nozzle chamber).clm.	US-PGPUB; USPAT	AND	ON	2007/08/13 16:42
L4	2	(Ink jet amorphous ceramic nozzle chamber heat\$3 silicon).clm.	US-PGPUB; USPAT	AND	ON	2007/08/13 16:42
L5	2	(Ink jet amorphous ceramic nozzle chamber heat\$3 silicon nitride dioxide oxynitride).clm.	US-PGPUB; USPAT	AND	ON	2007/08/13 16:42
L6	5	(ink jet amorphous ceramic nozzle chamber heat\$3).clm.	US-PGPUB; USPAT	AND	ON	2007/08/13 16:42
L7	4	L3 not L6	US-PGPUB; USPAT	AND	ON	2007/08/13 16:42
L8	7	(ink with jet with amorphous with ceramic).clm.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/13 16:42

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L2	3566	347/54,56,61,65.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/13 16:41
L3	9	(ink jet amorphous ceramic nozzle chamber).clm.	US-PGPUB; USPAT	AND	ON	2007/08/13 16:42
L4	2	(ink jet amorphous ceramic nozzle chamber heat\$3 silicon).clm.	US-PGPUB; USPAT	AND	ON	2007/08/13 16:42
L5	2	(Ink jet amorphous ceramic nozzle chamber heat\$3 silicon nitride dioxide oxynitride).clm.	US-PGPUB; USPAT	AND	ON	2007/08/13 16:42
L6	5	(ink jet amorphous ceramic nozzle chamber heat\$3).clm.	US-PGPUB; USPAT	AND	ON	2007/08/13 16:42
L7	4	L3 not L6	US-PGPUB; USPAT	AND	ON	2007/08/13 16:42
L8	7	(Ink with jet with amorphous with ceramic).clm.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/13 16:42
S1	2	"20040113986"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/27 08:53
S2	2	((("6746105") or ("6416167")).pn.	USPAT	OR	OFF	2006/02/13 12:15
S3	1	(US-20040113986-\$).did.	US-PGPUB	OR	ON	2006/02/13 11:03
S4	0	((("bubbleformingchamber"and(truncatedconenitrideoxynitride))andI3").pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/02/13 11:04
S5	1	("bubble forming chamber" and (truncated cone nitride oxynitride))and S3	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/02/13 12:17
S6	0	((("6746105" "6416167").pn. "20040113986") and ("bubble forming chamber" and (truncated cone nitride oxynitride))and "I3"	US-PGPUB; USPAT	OR	ON	2006/02/13 12:16
S7	0	((("6746105" "6416167").pn. "20040113986") and ("bubble forming chamber" and (truncated cone nitride oxynitride))and "I3"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/02/13 12:16
S8	0	((("6746105" "6416167").pn.) "20040113986") and ("bubble forming chamber" and (truncated cone nitride oxynitride))and "I3"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/02/13 12:16
S9	5	((("6746105" "6416167").pn.) "20040113986") ("bubble forming chamber" and (truncated cone nitride oxynitride))and "I3"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/02/13 12:17

## EAST Search History

S10	5	((("6746105" "6416167").pn.) "20040113986")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/02/13 12:17
S11	3	((("6746105" "6416167").pn.) "20040113986")	US-PGPUB; USPAT	OR	ON	2006/02/13 12:17
S12	72	("bubble forming chamber" and (truncated cone nitride oxynitride))	US-PGPUB; USPAT	OR	ON	2006/02/13 12:17
S13	1	S11 and S12	US-PGPUB; USPAT	OR	ON	2006/02/13 12:34
S14	14	(circular with cross with section with chamber) and silverbrook.in.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/02/13 13:21
S15	64999	"347"/\$.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/02/13 12:35
S16	14	S14 and S15	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/02/13 12:35
S17	2	((("6746105") or ("6416167")).PN.	USPAT	OR	OFF	2006/02/13 13:20
S18	1	(US-20040113986-\$.did.	US-PGPUB	OR	ON	2006/02/13 13:20
S19	0	S17 and S18	US-PGPUB	OR	ON	2006/02/13 13:20
S20	1	S17 S18	US-PGPUB	OR	ON	2006/02/13 13:20
S21	5	"20040113986" ("6746105" "6416167").pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/02/13 13:21
S22	3	"20040113986" ("6746105" "6416167").pn.	US-PGPUB; USPAT	OR	ON	2006/02/13 13:21
S23	9928	(circular with cross with section with chamber)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/02/13 13:22
S24	1	S22 and S23	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/02/13 13:21
S25	71792	(cross with section with chamber)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/02/13 13:22
S26	1	S22 and S25	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/02/13 13:22

## EAST Search History

S27	1854883	(cross with section)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/02/13 13:22
S28	3	S22 and S27	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/02/13 13:22
S29	44	("6416167" "5719604" "5666141" "4672398" "4737802" "5029805" "5258774" "4553393" "4864824" "4423401" "1941001" "3596275" "3373437" "3946398" "3683212" "3747120" "4459601" "4584590" "4490728" "4899181").pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/27 08:55
S31	1	"6726642".pn.	USPAT	OR	ON	2006/03/27 08:57
S32	1	"6746105".pn.	USPAT	OR	ON	2006/03/27 08:58
S33	1	"20030090542"	US-PGPUB; USPAT	OR	ON	2006/03/27 08:58
S34	8	S29 and ceramic	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/27 09:10
S35	3	(US-20040113986-\$ or US-20030090542-\$).did. or (US-6746105-\$).did.	US-PGPUB; USPAT	OR	ON	2006/03/27 09:11
S36	1	S35 and ceramic	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/27 09:11
S37	24	(US-20040100533-\$).did. or (US-6450622-\$ or US-6441838-\$ or US-6234598-\$ or US-5706041-\$ or US-6755509-\$ or US-6974210-\$ or US-6692108-\$ or US-5841452-\$ or US-6543879-\$ or US-4965594-\$ or US-5719604-\$).did.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/27 09:14
S38	1	S37 and ceramic	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/27 09:33
S39	20	("6416167" "5719604" "5666141" "4672398" "4737802" "5029805" "5258774" "4553393" "4864824" "4423401" "1941001" "3596275" "3373437" "3946398" "3683212" "3747120" "4459601" "4584590" "4490728" "4899181").pn.	USPAT	OR	ON	2006/03/27 09:19
S40	4	(US-20030090542-\$ or US-20040113986-\$).did. or (US-6746105-\$ or US-4965594-\$).did.	US-PGPUB; USPAT	OR	ON	2006/03/27 09:22
S41	1	(barrel truncated spherical) and S40	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/27 09:27
S42	5	(amorphous adj ceramic) same (pressure near4 chamber)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/27 09:37
S43	65496	"347"/\$.ccis.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/27 09:34

## EAST Search History

S44	4	S42 and S43	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/27 09:34
S45	1750	(ceramic) same (pressure adj chamber)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/27 09:38
S46	419	S43 and S45	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/27 09:37
S47	1294	347/61,65.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/27 09:37
S48	12	S45 and S47	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/27 09:37
S49	259	((ceramic) same (pressure adj chamber)) and heater	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/27 09:39
S50	0	S47 and S49	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/27 09:40
S51	643	((ceramic) same (pressure adj chamber)) and (heater thermal)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/27 09:39
S52	1	S47 and S51	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/27 09:39
S53	46	S43 and S49	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/27 09:40
S54	1000	347/65.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/27 09:42
S55	347	S54 and ceramic	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/27 09:43

## EAST Search History

S56	210	S55 not piezoelectric	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/27 09:43
S57	200	(heat\$3 near4 (element resistor)) and S56	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/27 09:43
S58	200	S57 not silverbrook.as.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/27 09:46
S59	34	(amorphous adj ceramic) same (benefit advantage improvement)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/27 09:49
S60	12	(amorphous adj ceramic) with (benefit advantage improvement)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/27 09:47
S61	0	(amorphous adj ceramic) and S54	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/27 09:49
S62	6	(amorphous adj ceramic) and S43	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/27 09:49
S63	0	(unitary with amorphous with ceramic).clm.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/09 13:39
S64	7	(ink with jet with amorphous with ceramic).clm.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/09 13:42
S65	2385	347/54,65.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/10 08:27
S66	2	(one with piece with ceramic) and S65	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/09 13:43
S67	5	(one with body with ceramic) and S65	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/09 13:44

## EAST Search History

S68	6	(one with part with ceramic) and S65	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/09 13:44
S69	1	(ceramic with block with nozzle) and S65	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/09 13:45
S70	2	(ink jet amorphous ceramic nozzle chamber heat\$3 silicon nitride dioxide oxynitride). clm.	US-PGPUB; USPAT	AND	ON	2007/07/10 08:28
S71	2	(ink jet amorphous ceramic nozzle chamber heat\$3 silicon).clm.	US-PGPUB; USPAT	AND	ON	2007/07/09 14:00
S72	5	(ink jet amorphous ceramic nozzle chamber heat\$3).clm.	US-PGPUB; USPAT	AND	ON	2007/07/09 14:01
S73	9	(ink jet amorphous ceramic nozzle chamber).clm.	US-PGPUB; USPAT	AND	ON	2007/07/09 14:01
S74	4	S73 not S72	US-PGPUB; USPAT	AND	ON	2007/07/09 14:06
S75	89	((amorphous (silicon with nitride) (silicon with dioxide) (silicon with oxynitride)) with ceramic) same (nozzle and chamber)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/10 08:39
S76	71925	"347"/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/09 14:08
S77	21	S75 and S76	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/09 14:08
S78	3543	347/54,56,61,65.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/10 08:27
S79	5110	(amorphous ceramic silicon nitride dioxide oxynitride) with (nozzle and chamber)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/10 08:29
S80	605	S78 and S79	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/10 08:29
S81	2969	(amorphous ceramic silicon nitride dioxide oxynitride) with (nozzle and chamber and (layer substrate))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/10 08:33

## EAST Search History

S82	591	S78 and S81	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/10 08:30
S83	1304	(amorphous ceramic nitride dioxide oxynitride) with (nozzle and chamber and (layer substrate))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/10 08:33
S84	242	S78 and S83	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/10 08:34
S85	1767	347/56	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/10 08:36
S86	17	347/56 and @ad>="20060326"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/10 08:36
S87	2	((amorphous (silicon with nitride) (silicon with dioxide) (silicon with oxynitride)) with ceramic) same (nozzle and chamber)).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/10 08:39
S88	7	(ink with jet with amorphous with ceramic).clm.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/10 08:40
S89	2	(ink jet amorphous ceramic nozzle chamber heat\$3 silicon nitride dioxide oxynitride).clm.	US-PGPUB; USPAT	AND	ON	2007/07/10 08:41
S90	2	(ink jet amorphous ceramic nozzle chamber heat\$3 silicon).clm.	US-PGPUB; USPAT	AND	ON	2007/07/10 08:41
S91	5	(ink jet amorphous ceramic nozzle chamber heat\$3).clm.	US-PGPUB; USPAT	AND	ON	2007/07/10 08:41
S92	9	(ink jet amorphous ceramic nozzle chamber).clm.	US-PGPUB; USPAT	AND	ON	2007/07/10 08:41
S93	4	S92 not S91	US-PGPUB; USPAT	AND	ON	2007/07/10 08:42